REMARKS

Claim Rejections under 35 U.S.C. §§ 102(e) and 103(a)

Claims 1-3, 5, and 11 were rejected under 35 U.S.C. §102(e) as being anticipated by Smirnov et al (Smirnov et al), U.S. Patent No. 6,321,133 and claims 4 and 6-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smirnov in view of Cheng (Cheng), U.S. Patent No. 6,067,548. Applicants request reconsideration of the rejection for the following reasons.

Patentability of the Claims

Applicants' invention is directed to a workflow system for managing work through the use of a plurality of workflow definitions. In particular, the invention provides two types of workflow, i.e. actual execution workflow (actual workflow) as the first type and monitoring workflow (virtual workflow) as the second type. Relationships between the two types of workflow are stored as workflow link definitions as set forth in Figs. 2-4 of the present application.

Progress information of virtual workflow can be acquired according to the present invention. Specifically, nodes whose progress states are necessary for monitoring the actual execution workflow are selected from the actual execution workflow. The selected nodes are linked with nodes of the

monitoring workflow or virtual workflow by using the workflow link definitions. In this way, the progress states of the selected nodes of the actual execution workflow can be concisely displayed by mapping them on the virtual workflow.

The process of acquiring virtual workflow progress information is shown in Fig. 10 of the present application. This process makes it possible to acquire the information about how far the inputted virtual workflow has been processed and then to display the information to the user while maintaining system confidentiality with respect to the user concerning other information. See page 30, lines 15-24 of the specification, for example.

According to the present invention, the actual execution workflow definitions can be maintained with restricted access while the monitoring workflow definition can be presented to a cooperative external company that has appropriate access. Then, if the actual execution workflow is changed, the monitoring workflow may not have to be changed because such changes can be absorbed in the actual execution workflow. Thus, there is a degree of flexibility provided with respect to implementing changes in the system. That is, notifications of changes in the actual execution workflow definitions to the external party who is presented with the monitoring workflow definitions become unnecessary.

In the present invention, a plurality of actual execution workflow definitions may be linked with a single monitoring workflow or virtual workflow definition by means of workflow link definitions. This also provides flexibility in the system. For example, the same monitoring (virtual) workflow definition can be represented to a plurality of parties in different ways as set forth in the specification with respect to the description of Fig. 13A-B.

With respect to the newly cited Smirnov et al. U.S. Patent No. 6,321,133, Applicants note that this patent is very similar to the previously cited Smirnov et al. U.S. Patent No. 6,279,009 and Applicants' comments with respect to the '009 patent set forth in the amendment filed December 3, 2003 are incorporated herein by reference.

Concerning the newly cited Smirnov et al.'133 patent, it is noted that Smirnov's "virtual representation" implies virtual representation of a real world "manufacturing environment," that is, Smirnov's virtual representation is electronic data expressing manufacturing processes in a real world factory. (See Summary of the Invention in Smirnov et al.'133, for example)

By contrast, Applicants' "virtual workflow" is generated from "actual execution workflows" which are expressed by electronic data, that is, Applicants' virtual workflow is not

generated from an actually existing workflow. Thus, it is noted that both actual execution workflows and virtual workflow are electronic data which can be processed by personal computers or the like. Users of Applicants' actual execution workflows select therefrom such nodes as permitted to be disclosed to a user of the virtual workflow. Applicants' virtual workflow is generated by combining such selected nodes of the actual execution workflows.

It is also noted here that Applicants' virtual workflow is an instance generated from a virtual workflow definition, and that Applicants actual execution workflow is an instance generated from an actual execution workflow definition.

To illustrate the difference as set forth above, attached is a sketch using Fig. 5 of the Smirnov et al.'133 patent.

As shown in the attached sketch, Smirnov's et al.'s "Model 130" may correspond to Applicants actual execution workflow definition. In Applicants' invention, however, there is a plurality of actual execution workflow definitions, and based on the actual execution workflow definitions, a plurality of actual execution workflows (instances) are generated.

Secondly, Fig. 5 of Smirnov et al. fails to disclose Applicants' virtual workflow definition, which is generated

from a plurality of nodes selected from a plurality of actual execution workflow definitions.

Lastly, Fig. 5 of Smirnov et al. also fails to disclose Applicants linking between instances of actual execution workflows and an instance of a virtual workflow.

The previously cited Cheng'548 patent discloses "Virtual Link 56." However, Cheng's link is not generated from such a virtual workflow as recited in Applicants' claims.

Accordingly, Applicants' invention is non-obvious and patentable over the combination of Smirnov et al. and Cheng references taken either alone or in combination. Claims 1-11, as amended, are submitted to be allowable.

In view of the foregoing amendments and remarks, reconsideration and reexamination are respectfully requested.

Respectfully submitted,

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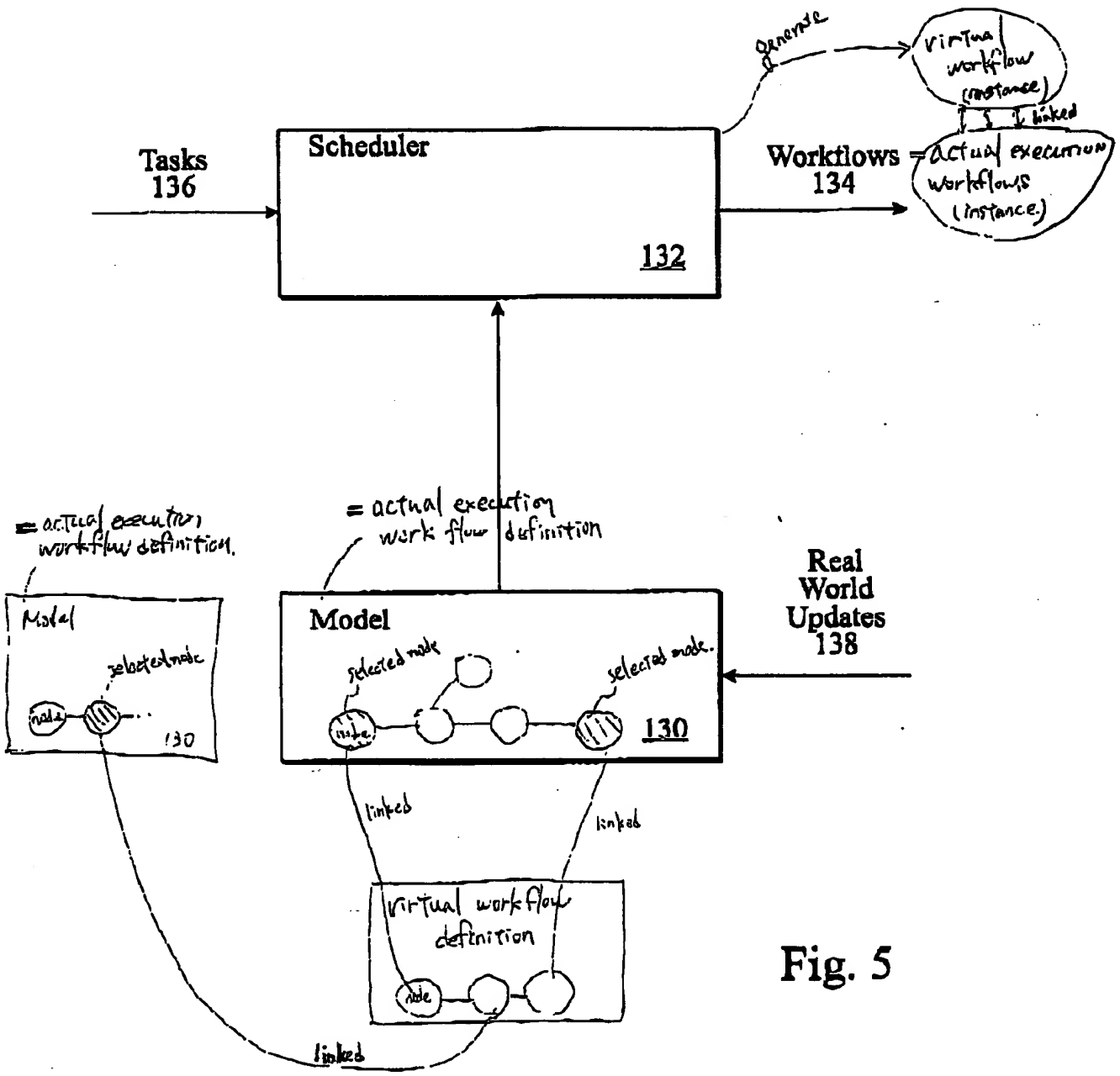
Tasks
136
Scheduler
132
Workflows
134
= actual execution workflows (instance.)
= actual execution work flow definition
Model
selected node
selected node.
130
Real World Updates
138
= actual execution workflow definition.
Model
selected node
130
linked
linked
virtual workflow definition
linked

Fig. 5